

**Mt. Hope Cemetery Corporation
Penobscot County
Bangor, Maine
A-377-71-K-R**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Mt. Hope Cemetery Corporation (Mt. Hope), located in Bangor, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their crematory facility.

B. Emission Equipment

Crematory #1 & #2: Model L-1701

Class Incinerator	IV-A
No. of Chambers	3
Type of Waste	Type 4
Max. Design Load Rate	600 lb
Auxiliary Fuel Input:	
Primary Chamber (MMBtu/hr)	0.75 firing natural gas
Secondary Chamber (MMBtu/hr)	1.25 firing natural gas
Emission Control	Afterburner

Crematory #3: Model 2001-1

Incinerator Class	IV-A
Number of Chambers	3
Type of Waste	Type 4
Max. Design Load Rate	600 lb
Auxiliary Fuel Input:	
Primary burner (MMBtu/hr)	0.75 firing natural gas
Secondary burner (MMBtu/hr)	1.25 firing natural gas
Emission Controls	Afterburner

Crematory #4

Manufacturer	Crematory Manufacturing & Service, Inc.
Incinerator Class	IV-A
Number of Chambers	2
Type of Waste	Type 4
Max. Design Load Rate	600 lb
Auxiliary Fuel Input:	
Primary burner (MMBtu/hr)	0.75 firing natural gas
Secondary burner (MMBtu/hr)	1.5 firing natural gas
Emission Controls	Afterburner

C. Application Classification

The application for Mt. Hope does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emissions units only.

II. BEST PRACTICAL TREATMENT

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

C. BPT for Class IV-A (crematory) incinerators is determined to include the following:

Operating temperature in the secondary chamber or refractory lined stack shall be maintained at a minimum of 1400°F with a stack gas retention time at or above 1400°F, of at least one second.

To ensure an efficient burn and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1200°F.

The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1400°F for the duration of the burn cycle.

A pyrometer and ¼ inch test port shall be maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to ensure a flue gas retention time of not less than 1.0 seconds at a minimum of 1400°F.

A log shall be maintained recording the weight of the remains charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a continuous chart recorder, the start time, date and weight of charge may be logged on the chart.

A maximum particulate emission rate of 0.10 gr/dscf corrected to 12% CO₂ shall be met.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

Visible emissions from the incinerator shall not exceed 10% opacity on a six-minute block average basis.

B. Facility Emissions

Emissions (12-month rolling total) are based on operating each unit 8,760 hours per year firing natural gas.

**Total Annual Emissions for the Facility
(used to calculate the annual license fee)**

Pollutant	Total Tons/year
PM	6.3
PM ₁₀	6.3
SO ₂	0.1
NO _x	11.0
CO	4.0
VOC	0.2

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, Mt. Hope is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

will receive Best Practical Treatment,
will not violate applicable emission standards,
will not violate applicable ambient air quality standards in
conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-377-71-K-R subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions. [MEDEP Chapter 115]
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]

- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.[MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [MEDEP Chapter 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

(16) Crematory Units

- A. Emissions from Crematory #1, #2 & #3 each shall not exceed the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.10 @ 12% CO ₂	0.36
PM ₁₀	-	0.36
SO ₂	-	0.01
NO _x	-	0.63
CO	-	0.23
VOC	-	0.01

- B. Emissions from Crematory #4 shall not exceed the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.10 @ 12% CO ₂	0.36
PM ₁₀	-	0.36
SO ₂	-	0.01
NO _x	-	0.65
CO	-	0.24
VOC	-	0.01

- C. Operating temperature in the secondary chamber or refractory lined stacks shall be maintained at a minimum of 1400°F with a stack gas retention time at or above 1400°F, of at least one second. [MEDEP Chapter 115, BPT]
- D. To ensure an efficient burn and to prevent odors and visible emissions, the secondary chambers will be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1200°F. [MEDEP Chapter 115, BPT]
- E. The temperature in the secondary chambers or refractory lined stacks shall be maintained at or above 1400°F for the duration of the burn cycle. [MEDEP Chapter 115, BPT]
- F. A pyrometer and ¼ inch test port shall be maintained and operated at that location of the incinerator or refractory lined stack which provides sufficient volume to ensure a flue gas retention time of not less than 1.0 second at a minimum of 1400°F. [MEDEP Chapter 115, BPT]
- G. A log shall be maintained recording the weight of the remains charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For

facilities operating a continuous chart recorder, the start time, date and weight of charge may be logged on the chart. [MEDEP Chapter 115, BPT]

- H. A maximum particulate emission rate of 0.10 gr/dscf corrected to 12% CO₂ shall be met. [MEDEP Chapter 115, BPT]
 - I. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License. [MEDEP Chapter 115, BPT]
 - J. Visible emissions from each incinerator shall not exceed 10% opacity on a six-minute block average basis. [MEDEP Chapter 101, Chapter 115, BPT]
 - K. All pacemakers or similar devices shall be removed from the deceased prior to cremation. [MEDEP Chapter 115, BPT]
- (17) **Payment of Fees**
Mt. Hope shall pay the annual air emission license fee within 30 days of **November 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]
- (18) **Term of License**
The term of this order shall be for five (5) years from the signature date below. [MEDEP Chapter 115]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 24, 2003

Date of application acceptance: January 6, 2004

Date filed with the Board of Environmental Protection _____

This order prepared by Mark E. Roberts, Bureau of Air Quality